

Elliptical Orbits of Moderate Eccentricities," "On a Simple Solution of Kepler's Problem," and on "Two Auxiliary Tables for the Solution of Kepler's Problem." We may also mention the interesting paper he published in the *Monthly Notices* for 1885 March, entitled "Data for a Graphical Representation of the Solar System," the principle of which we may venture to quote. "The Sun's centre being the common focus of all the orbits, a plane passing through the Sun's centre perpendicular to the ecliptic will intersect all the orbits. Let this plane rotate, and let, for each orbit, the tracing be represented which the point of intersection produces on the plane in the course of a full rotation, and which for the present purpose may perhaps be called the 'ecliptical intersect' of the orbit. The form or shape of the tracing or intersect depends on the elements i , e , ω of the orbit: i , the inclination to the ecliptic; e , the eccentricity; and ω , the angular distance or departure of the perihelion from the ascending node Ω . A circular orbit in the plane of the ecliptic would accordingly be represented by a point or dash, a circular orbit inclined to the ecliptic by a circular arc, an eccentric orbit in which ω is $= \pm 90^\circ$ by an arc of another curve. In order to lay down the 'ecliptical intersect' of any actual orbit, the coordinates of a sufficient number of points must be known, through which the curve may be easily drawn by hand. The coordinates required are the curtate distances from the Sun and the distances from the plane of the ecliptic, or $r \cos b$ and $r \sin b$, if r denotes the radius vector and b the latitude, to which must be added the corresponding ecliptical longitudes l and also the true anomalies v ."

Marth was never married, and gave up all family life in order to pursue his scientific studies. His aspiration had been to be able to make observations with a perfect instrument in the best climate, but his ideal was never realised, and this disappointment to his sensitive nature, coupled with indifferent health, seems to have rendered his life not too happy. He had a wide and accurate knowledge of astronomical history and a remarkable memory. An old-standing complaint, brought about by his sedentary habits, assumed an acute form while on a visit to Heidelberg, and he quietly passed away on 1897 August 6.

The honorary degree of M.A. was conferred upon him by the University of Durham. He was first elected a Fellow of the Society on 1854 May 12 and resigned in 1857; subsequently he was elected again a Fellow on 1878 January 11. E. B. K.

WILLIAM ROXBURGH was the youngest son of the late Dr. William Roxburgh, sometime Superintendent of the Botanic Gardens, Calcutta, and author of the *Flora Indica*. He was born at Calcutta on 1812 May 15. He was educated at the New Academy, Edinburgh, and afterwards entered the University of that city, where he took the degree of M.D. in 1835. In the following year he settled in London, and pursued his medical

studies at the Middlesex Hospital. He was a member of the original Council of the Royal Botanic Society of London, and took an active part in planning the gardens and in promoting the interests of that Society. In 1846 he was elected a Member of the Royal Institution of Great Britain, and formed a close friendship with the late Professor Faraday. He was for some years Physician to the Western General Dispensary, and was in 1857 admitted a Fellow of the Royal College of Physicians, London.

In consequence of a severe illness he retired from the active practice of his profession, and removed to Edinburgh in 1859. After residing there and at several places in England, he came to Ipswich in 1886, where he died on 1897 April 7.

During the last twenty years of his life he took special interest in Solar Physics. He was elected a Fellow of the Society on 1853 June 10.

CHARLES STEWART was born at Bo'ness, Linlithgowshire, in 1818, and died at his residence, Ackender House, Alton, Hants, 1897 September 6. For many years Dr. Stewart had a private school, from which he retired in 1889. He was elected a Fellow of the Society 1865 November 10, and was specially interested in meteors and nebulae.

EDWARD JAMES STONE was born in London on 1831 February 28. He was the elder son of Mr. Edward Stone, a member of a Devonshire family, who carried on a successful business in London. Young Stone was educated privately, but, for the benefit of his health, a large portion of his early youth was spent among his relatives in the country. His preparatory education was therefore much interrupted, his parents preferring that he should enjoy for a time the freedom of a country life, in order that his strength might be sufficiently established to enable him eventually to assist his father in his business. During these early years, young Stone, who was extremely partial to his Devonshire home, showed no indications of the innate talent he undoubtedly possessed. On his return to London, however, as his age advanced, a love of private reading was noticed, though his opportunities were very limited, for he had passed his twentieth year before he was induced to begin the study of classics or mathematics. Soon after this he was persuaded by his friends to become a student at King's College, London, and he considered that this new departure was the turning-point in his life. He has often remarked that he owed his successful career at Cambridge to the careful training he received there, especially to the Rev. T. G. Hall, who was the first to discover his latent mathematical power, and to the Rev. Dr. Major, who assisted him privately with his classics, etc.

At King's College Stone soon gave evidence of the mathematical talent that up to this time had remained dormant. He was very enthusiastic, and his progress both in classics and